CLAIMS

What is claimed is:

1.   A method of providing caller information comprising:

receiving a voice signal;

detecting portions of the voice signal that are inaudible using a perceptual audio processor;

replacing the inaudible portions of the voice signal with digital caller information; and

transmitting the resulting voice signal specifying the digital caller information.

2.   The method of claim 1, wherein the digital caller information is associated with a call participant, said transmitting step comprising sending the resulting voice signal specifying the digital caller information to a different call participant over an established telephone call.

3.   The method of claim 2, wherein the digital caller information specifies at least one of an identity of the call participant and a telephone number of the call participant.

4.   The method of claim 1, said identifying step comprising using a psychoacoustic model to identify the inaudible portions of the voice signal.

5.   The method of claim 1, further comprising:

receiving the voice signal specifying the digital caller information; and

decoding the digital caller information.

6.   The method of claim 5, further comprising presenting a representation of the digital caller information.

7.   The method of claim 6, further comprising playing an audio representation of the received voice signal.

8.   The method of claim 7, wherein the audio representation of the received voice signal is played substantially concurrently with the presentation of the digital caller information.

9.   A system for providing caller information:

means for receiving a voice signal;

means for detecting portions of the voice signal that are inaudible using a perceptual audio processor;

means for replacing the inaudible portions of the voice signal with digital caller information; and

means for transmitting the resulting voice signal specifying the digital caller information.

10.   The system of claim 9, wherein the digital caller information is associated with a call participant, said means for transmitting comprising means for sending the resulting voice signal specifying the digital caller information to a different call participant over an established telephone call.

11.   The system of claim 10, wherein the digital caller information specifies at least one of an identity of the call participant and a telephone number of the call participant.

12.   The system of claim 9, said means for identifying comprising a psychoacoustic model for identifying the inaudible portions of the voice signal.

13.   The system of claim 9, further comprising:

means for receiving the voice signal specifying the digital caller information; and

means for decoding the digital caller information.

14.   The system of claim 13, further comprising means for presenting a representation of the digital caller information.

15.   The system of claim 14, further comprising means for playing an audio representation of the received voice signal.

16.   The system of claim 15, wherein the audio representation of the received voice signal is played substantially concurrently with the presentation of the digital caller information.

17.   A machine readable storage, having stored thereon a computer program having a plurality of code sections executable by a machine for causing the machine to perform the steps of:
       receiving a voice signal;
       detecting portions of the voice signal that are inaudible using a perceptual audio processor;
       replacing the inaudible portions of the voice signal with digital caller information; and
       transmitting the resulting voice signal specifying the digital caller information.

18.   The machine readable storage of claim 17, wherein the digital caller information is associated with a call participant, said transmitting step comprising sending the resulting voice signal specifying the digital caller information to a different call participant over an established telephone call.

19.   The machine readable storage of claim 18, wherein the digital caller information specifies at least one of an identity of the call participant and a telephone number of the call participant.

20.   The machine readable storage of claim 17, said identifying step comprising using a psychoacoustic model to identify the inaudible portions of the voice signal.

21.   The machine readable storage of claim 17, further comprising:
       receiving the voice signal specifying the digital caller information; and

decoding the digital caller information.

22. The machine readable storage of claim 21, further comprising presenting a representation of the digital caller information.

23. The machine readable storage of claim 22, further comprising playing an audio representation of the received voice signal.

24. The machine readable storage of claim 23, wherein the audio representation of the received voice signal is played substantially concurrently with the presentation of the digital caller information.